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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/774,594 | 02/10/2004 | Yao-Ching Stephen Chen | SVL920030104US1 | 1108 |

45727 7590 04/18/2007
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| EXAMINER |
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RADTKE, MARK A

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| ART UNIT | PAPER NUMBER |
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2165

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/18/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|---------------------------------|-----------------------------|--|
| Office Action Summary | Application No. . 10/774,594 | Applicant(s) CHEN ET AL. | |
| | Examiner Mark A. X Radtke | Art Unit 2165 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Remarks

1. In response to communications filed on 31 January 2007, claim(s) 1, 5, 11, 28 and 29 is/are amended per Applicant's request. Therefore, claims 1-29 are presently pending in the application, of which, claim(s) 1, 5, 11, 21 and 28-29 is/are presented in independent form.
2. In light of the Terminal Disclaimer filed 31 January 2007, the provisional double patenting rejection is withdrawn. In light of Applicant's arguments, the rejection under 35 U.S.C. 102(a) in view of the JAXB reference is withdrawn.
3. The affidavits filed 31 January 2007 under 37 C.F.R. 1.132 have been fully considered but are not effective to overcome the rejection under 35 U.S.C. 102(a). Four inventors are listed in the current application. Four authors are listed on the prior art reference. There are four individuals whose contributions must be accounted for in order to overcome the prior art rejection. The affidavits attempt to disclaim P.S. Housel and M. Franz because they "merely helped with the review of related work and writing". N. Wang asserts "the invention was developed with Guogen Zhang" (i.e., N. Wang and G. Zhang developed the invention). Also, the instant application has two additional individuals (F.L. Lin and Y.C.S. Chen) who were not listed as authors of the prior art reference. Based on the statements of N. Wang, authorship of the prior art reference and inventorship of the claimed invention should be attributed solely to N. Wang and G.

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Zhang. Based on the statements of the other three inventors, all four of them claim ownership. Furthermore, every limitation of the claimed invention was taught by the prior art, and F.L. Lin and Y.C.S. Chen are not listed as authors of the prior art reference, so it is unclear why they are listed as inventors (see 35 U.S.C. 116). The contributions (or lack thereof) of F.L. Lin, Y.C.S. Chen, P.S. Housel and M. Franz must be established in order for the affidavits to be effective (see MPEP 2132.III). Accordingly, the rejection under 35 U.S.C. 102(a) is upheld.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-29 are rejected under 35 U.S.C. 102(a) as being anticipated by Franz et al., An Efficient XML Schema Typing System, November 18, 2003, pages 1-20 and hereinafter referred to as Franz.

As to claims 1 and 28, Franz teaches a method for validating a fragment of a structured document comprising steps of: a. compiling an XML schema definition, b. storing said XML schema definition, c. receiving as input said stored XML schema

definition and a fragment of a structured document into a runtime validation engine, and outputting a validation pass or fail on the basis of said input (pages 1-5).

As to claim 2, Franz teaches wherein said structured document is an XML document (pages 1-5).

As to claim 3, Franz teaches wherein said runtime validation engine is comprised of a generic parser and a runtime schema validation parser (pages 1-5).

As to claim 4, Franz teaches wherein said generic parser is a generic XML parser (pages 1-5).

As to claims 5 and 29, Franz teaches a method of preparing a fragment of a structured document for validation comprising steps of: a. locating a start state for said validation process from a type-mapping table, b. obtaining a token from said structured document fragment, c. determining whether said token is of element type said structured document fragment is to be validated against, d. checking whether said token signifies end of said structured document, and returning a validation success or a validation failure, based on said determining and checking steps (pages 1-5).

As to claim 6, Franz teaches wherein said structured document is an XML document (pages 1-5).

As to claim 7, Franz teaches wherein said token is either an element type name or an attribute name (pages 1-5).

As to claim 8, Franz teaches wherein if in said determining step it is determined that said token is not of said element type, returning a validation failure, else repeating process from said obtaining step (pages 1-5).

As to claim 9, Franz teaches wherein if in said checking step it is determined that said token signifies end of said structured document, said validation process terminates (pages 1-5).

As to claim 10, Franz teaches wherein said validation process is repeated from said obtaining step until said validation process returns a validation failure or it is determined in said checking step that said obtained token signifies end of said structured document and said validation process terminates (pages 1-5).

As to claim 11, Franz teaches a method of constructing a type-mapping table comprising steps of: a. building a type hierarchy ordered tree from a structured document schema, b. supplying input to an element validation module, c. creating a

type-mapping table entry for a current element type in said structured document schema, d. traversing said type hierarchy ordered tree, and populating a type-mapping table with type-mapping entries created in said creating step (pages 1-5).

As to claim 12, Franz teaches wherein said structured document schema is an XML schema (pages 1-5).

As to claim 13, Franz teaches wherein said method takes as input an AAE (pages 1-5).

As to claim 14, Franz teaches wherein said AAE is comprised of an annotation hierarchy and an automaton encoding (pages 1-5).

As to claim 15, Franz teaches wherein said data structures and variables are comprised of a token array, a variable holding the index of the last token received, and a variable holding the index of start token received (pages 1-5).

As to claim 16, Franz teaches wherein said type-mapping table entry for said element type is formed by supplying a start token from an annotation record to an element validation module (pages 1-5).

As to claim 17, Franz teaches wherein said element validation module is reset after each entry is created for each element type (pages 1-5).

As to claim 18, Franz teaches wherein said data structures are initialized and said variables are set to zero after an entry has been created for each element type (pages 1-5).

As to claim 19, Franz teaches wherein said type-mapping table entries are comprised of a result path to current element type, a current element type, an annotation record for current element type, and a current state (pages 1-5).

As to claim 20, Franz teaches wherein said process is repeated for each global element child type (pages 1-5).

As to claim 21, Franz teaches wherein said traversing step further comprises steps of: a. determining whether an entry has been created for all element types in said schema, b. appending a start token of a current sub-element type to a token array data structure, c. incrementing an environment variable representing an index for a last token, d. supplying said token to said element validation module, e. creating an entry for said current sub-element type in said type-mapping table, and f. updating data structures and variables (pages 1-5).

As to claim 22, Franz teaches wherein said traversing step takes as input an AAE, said current element type, and said data structures and variables (pages 1-5).

As to claim 23, Franz teaches wherein said entry is comprised Of a result path for said current sub-element type, an element type name for said current sub-element type, an annotation record for said current sub-element type, and a current state (pages 1-5).

As to claim 24, Franz teaches wherein if said current sub-element type is a reference to a global element type, said result path is a union of the path from root of said schema to said current sub-element type and the result path in a type-mapping entry in said type-mapping table of said referenced global type; otherwise said result path is the path from root of said schema to said sub-current element type (pages 1-5).

As to claim 25, Franz teaches wherein said updating step further comprises steps of: a. setting a current index variable equal to an index variable representing an index of last token and b. pushing an annotation record for said current sub-element type and said current index of said token array onto a temp stack (pages 1-5; page 10).

As to claim 26, Franz teaches wherein said traversing step is recursively performed until type-mapping entries are created for all sub-element types descending

from said current element type (pages 1-5; page 10).

As to claim 27, Franz teaches wherein if it is determined in said determining step that an entry has been created for all element types in said schema; an end token is appended to said token array; said token is supplied to said element validation module, an annotation record for said current sub-element type is obtained from said temp stack, all tokens from a subset of indices within said token array are supplied to said element validation module, and said process terminates (pages 1-5; page 10; page 15).

Response to Arguments

6. Applicant's arguments filed on 31 January 2007 with respect to the rejected claims in view of the cited references have been fully considered but are moot in view of the withdrawn rejection ("JAXB").

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications should be directed to the examiner, Mark A. Radtke. The examiner's telephone number is (571) 272-7163, and the examiner can normally be reached between 9 AM and 5 PM, Monday through Friday.

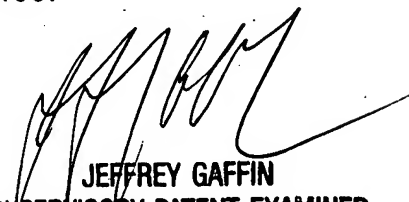
If attempts to contact the examiner are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached at (571) 272-4146.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (800) 786-9199.

maxr

12 April 2007

Tim 4/12/07


JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100